

FIG.1

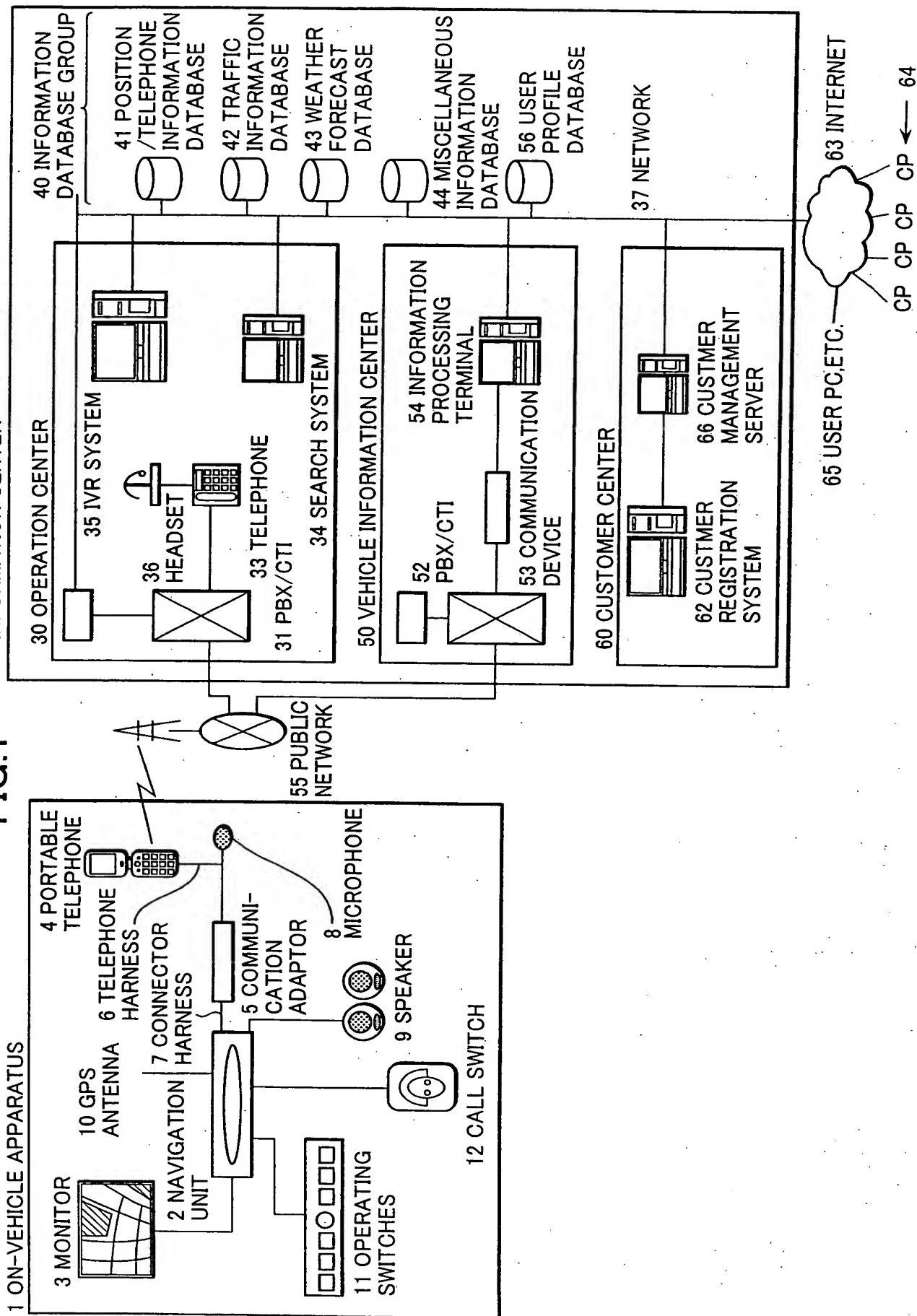


FIG.2

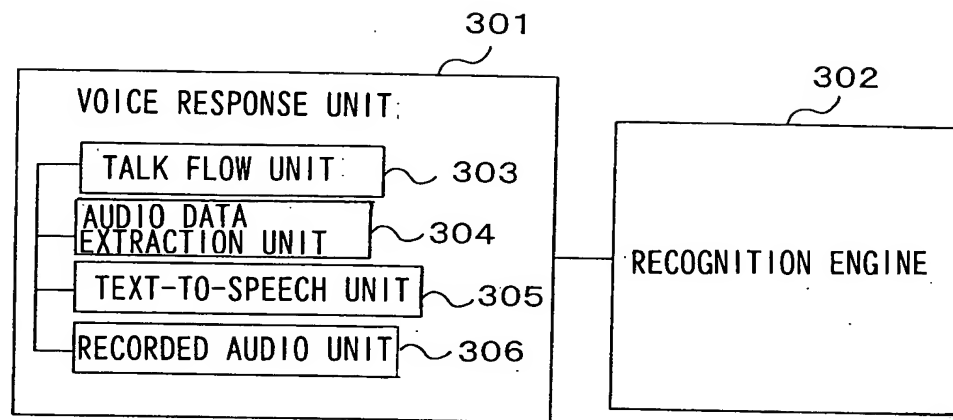


FIG.3

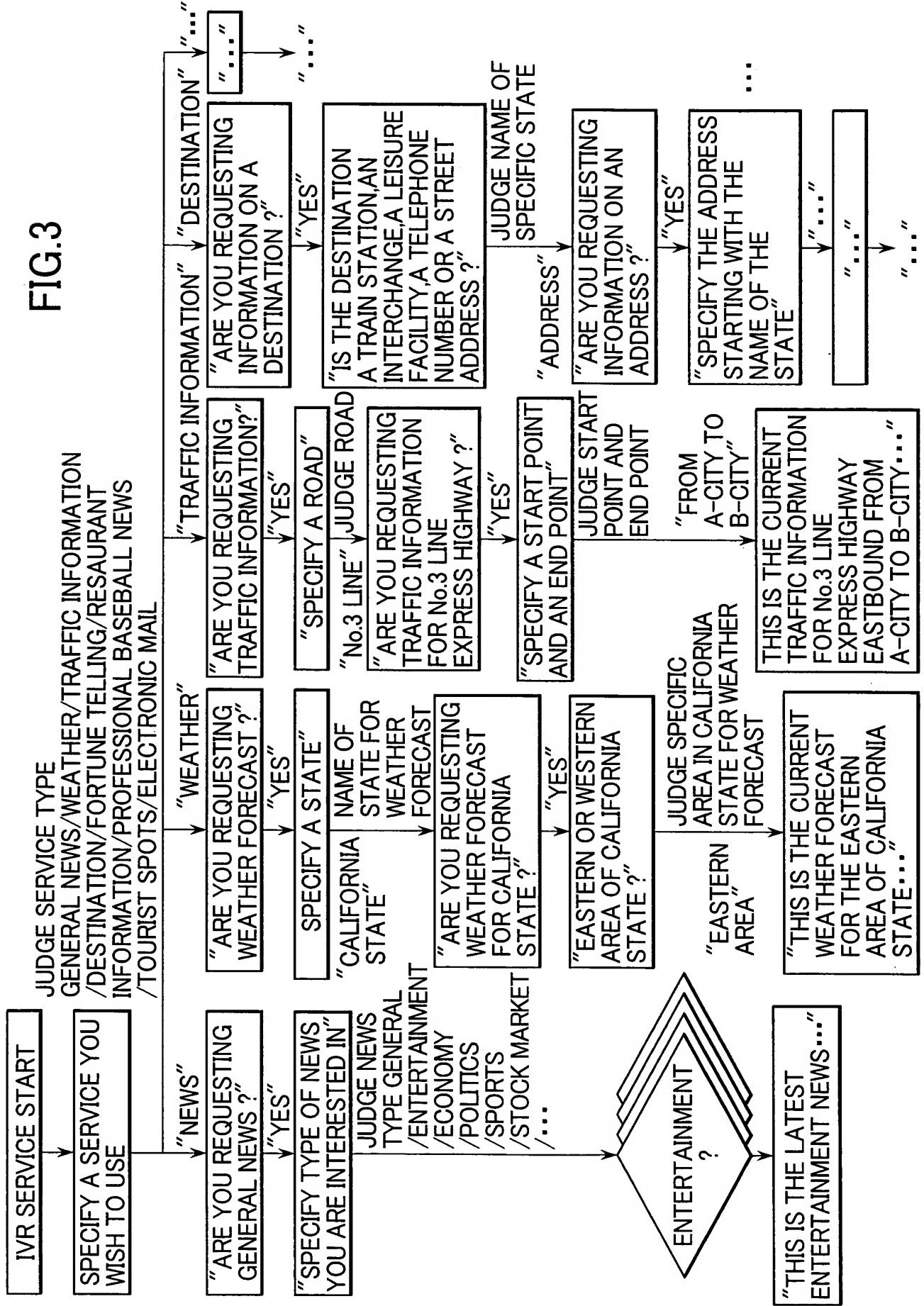


FIG.4A

EXAMPLE OF CUSTOMIZATION EXECUTED ON THE WEB

400 TOP SCREEN

VEHICLE AUDIO SERVICE

WELCOME TO VEHICLE AUDIO SERVICE
ENTER YOUR MEMBER ID AND PASSWORD

ID

PASSWORD

PRESS HERE IF YOU
ARE A NON-MEMBER

401

AUDIO SERVICE REGISTRATION

THE AUDIO SERVICE CAN BE
CUSTOMIZED TO SUIT YOUR NEEDS

CUSTOMIZE ?

402

TALK SCRIPT EDIT SCREEN

SELECT SERVICES YOU ARE LIKELY
TO USE FREQUENTLY

1.GENERAL NEWS
2.WEATHER FORECAST
(WEEKLY)
3.WEATHER FORECAST
(TODAY/TOMORROW)
4.TRAFFIC INFORMATION
5.DESTINATION
6.TELEPHONE SEARCH
7.FORTUNE TELLING
8.RESTAURANT
INFORMATION
9.PROFESSIONAL
BASEBALL NEWS

①

TO FIGS.4A,4C AND 4E

②

FROM FIGS.4B,4D AND 4F

FIG.4B

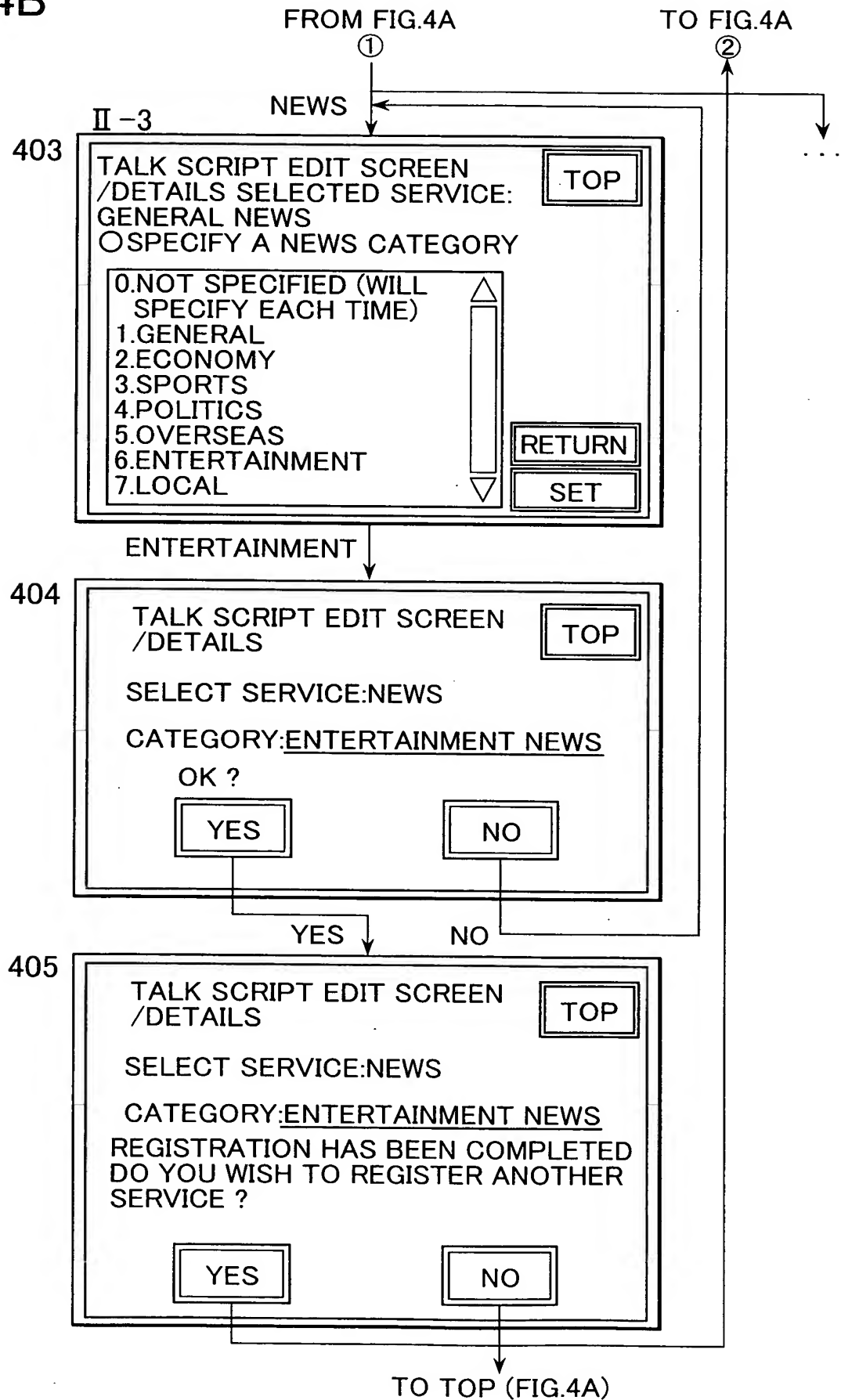


FIG.4C

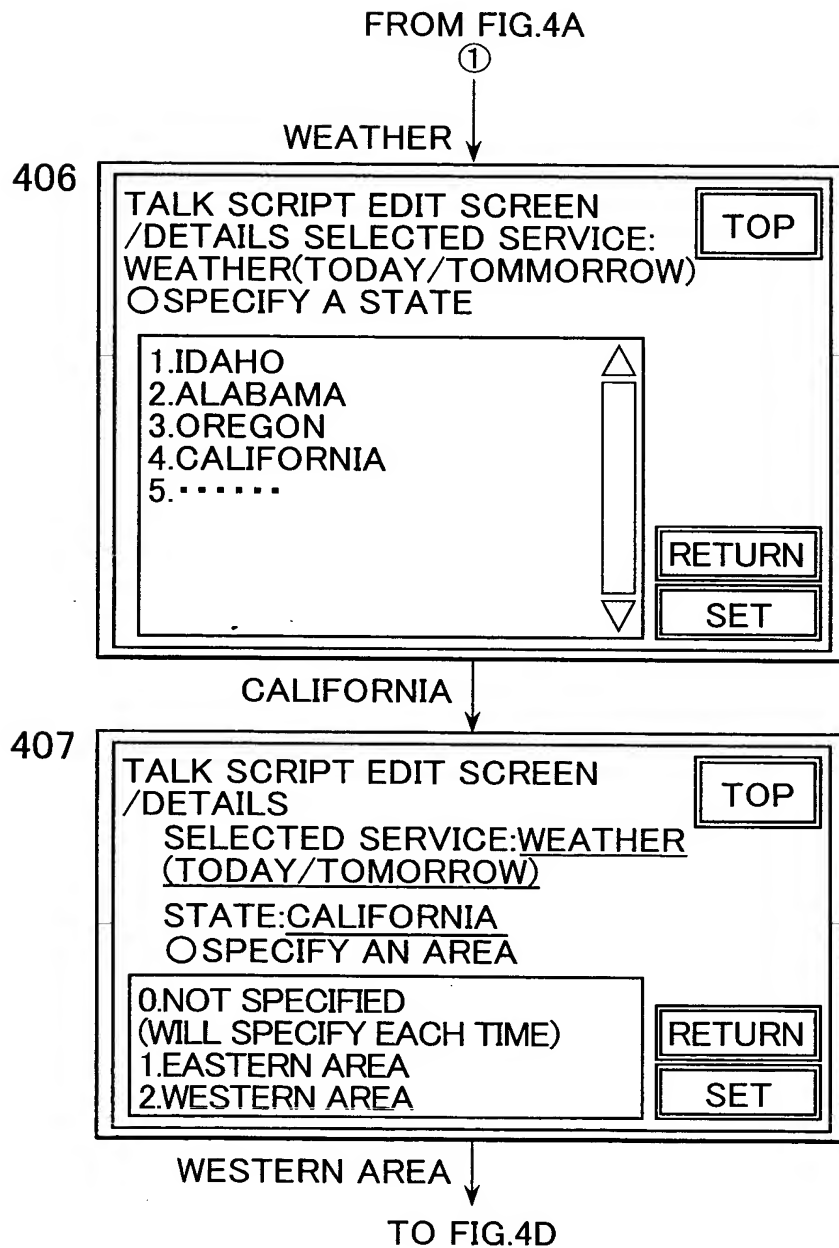


FIG.4D

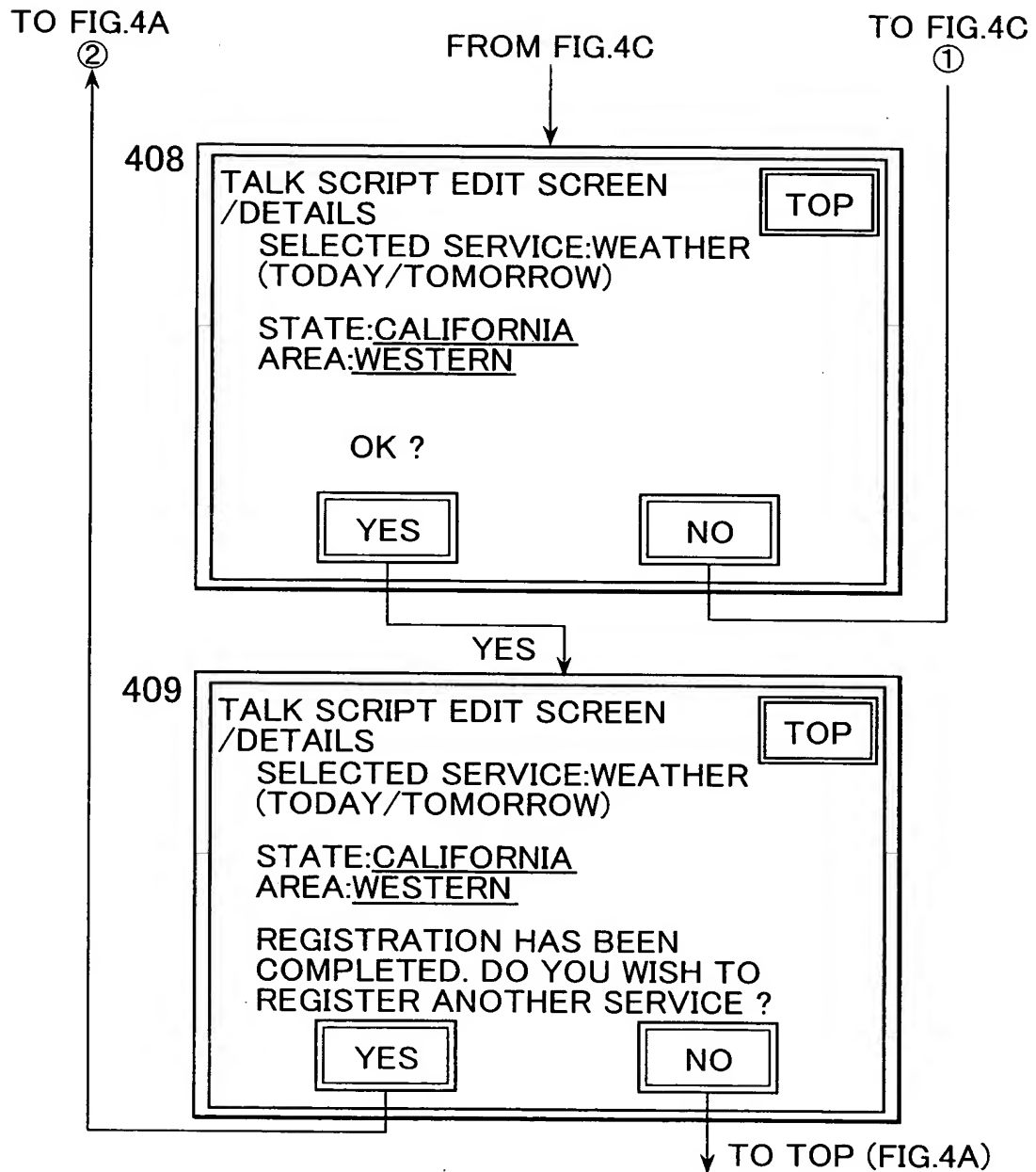


FIG.4E

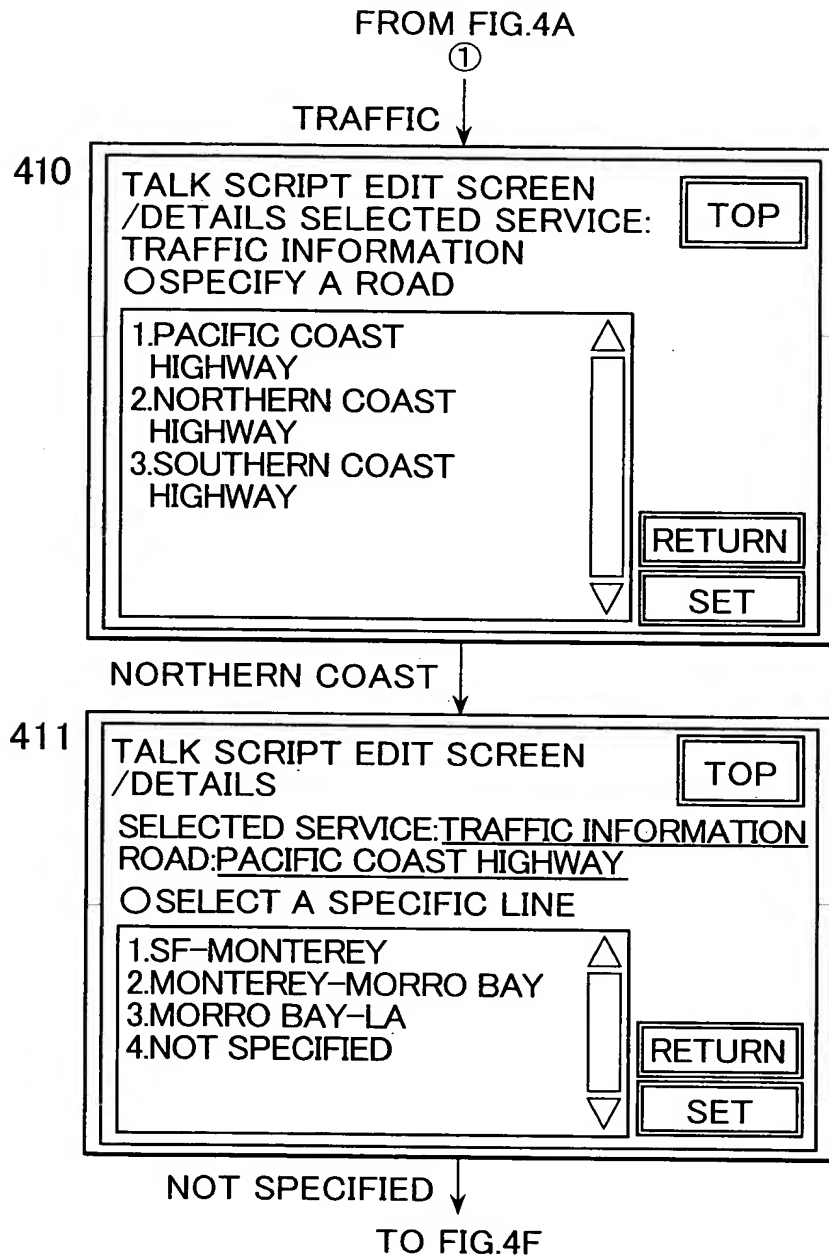


FIG.4F

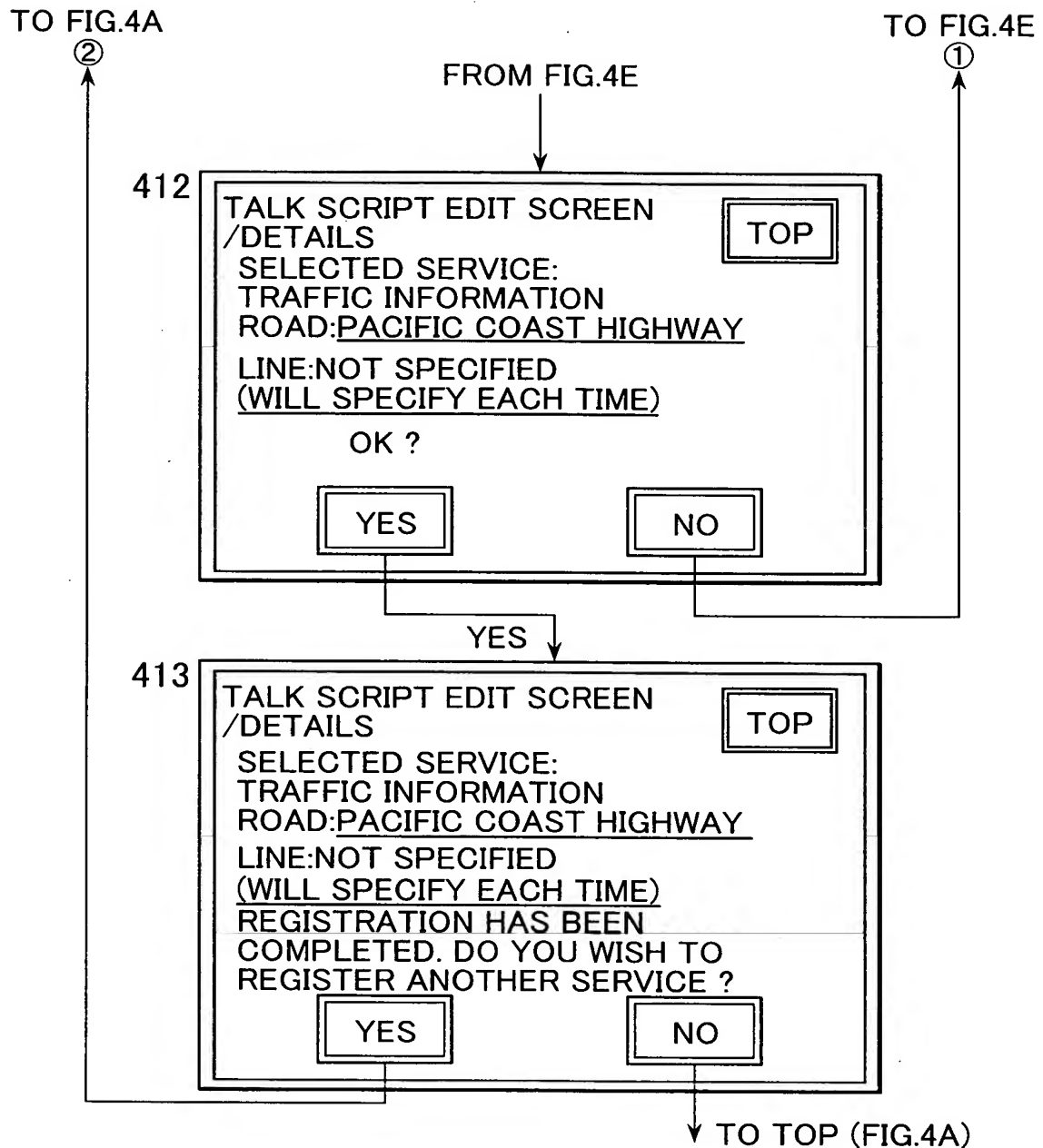


FIG.5

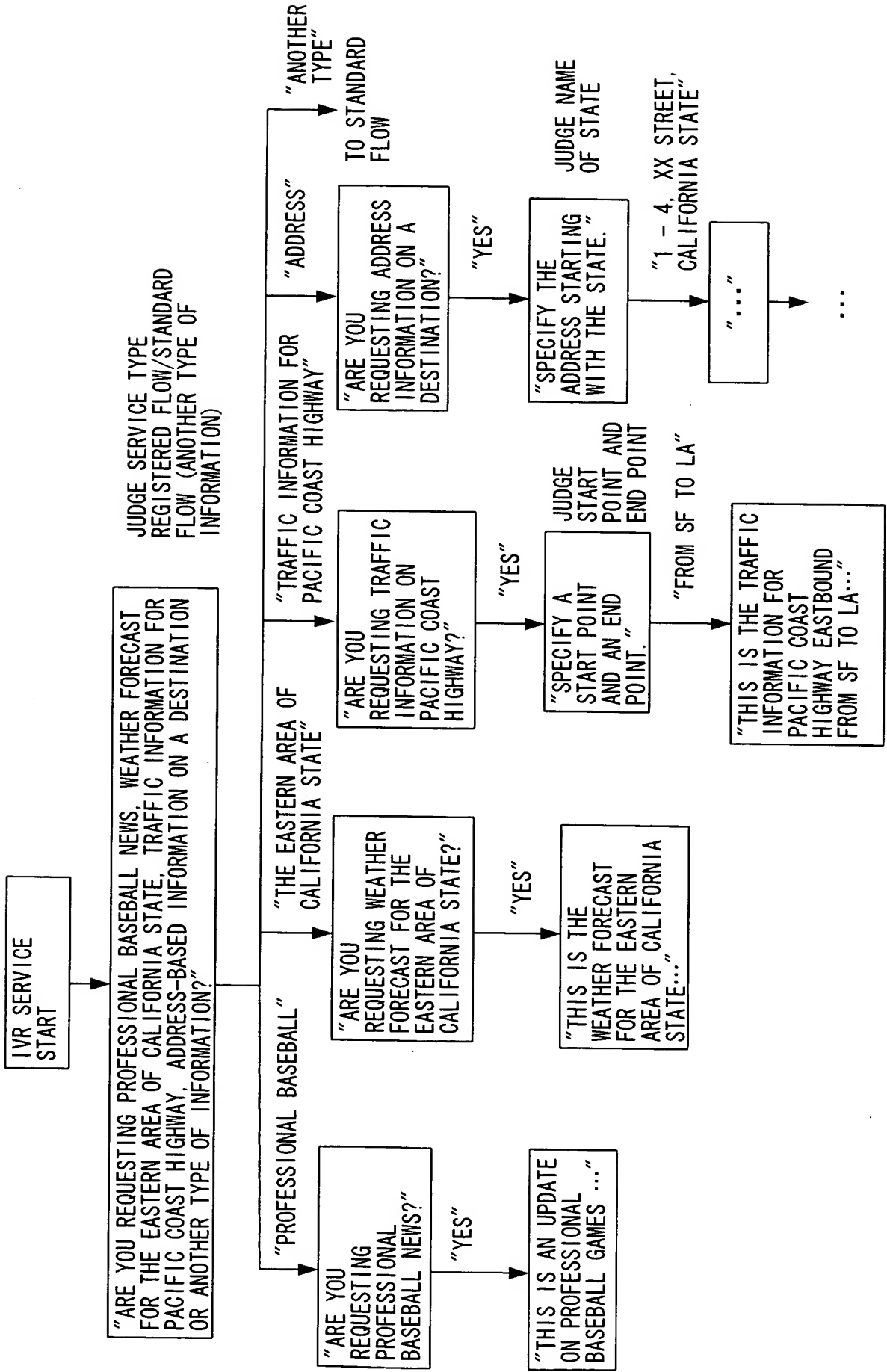


FIG.6

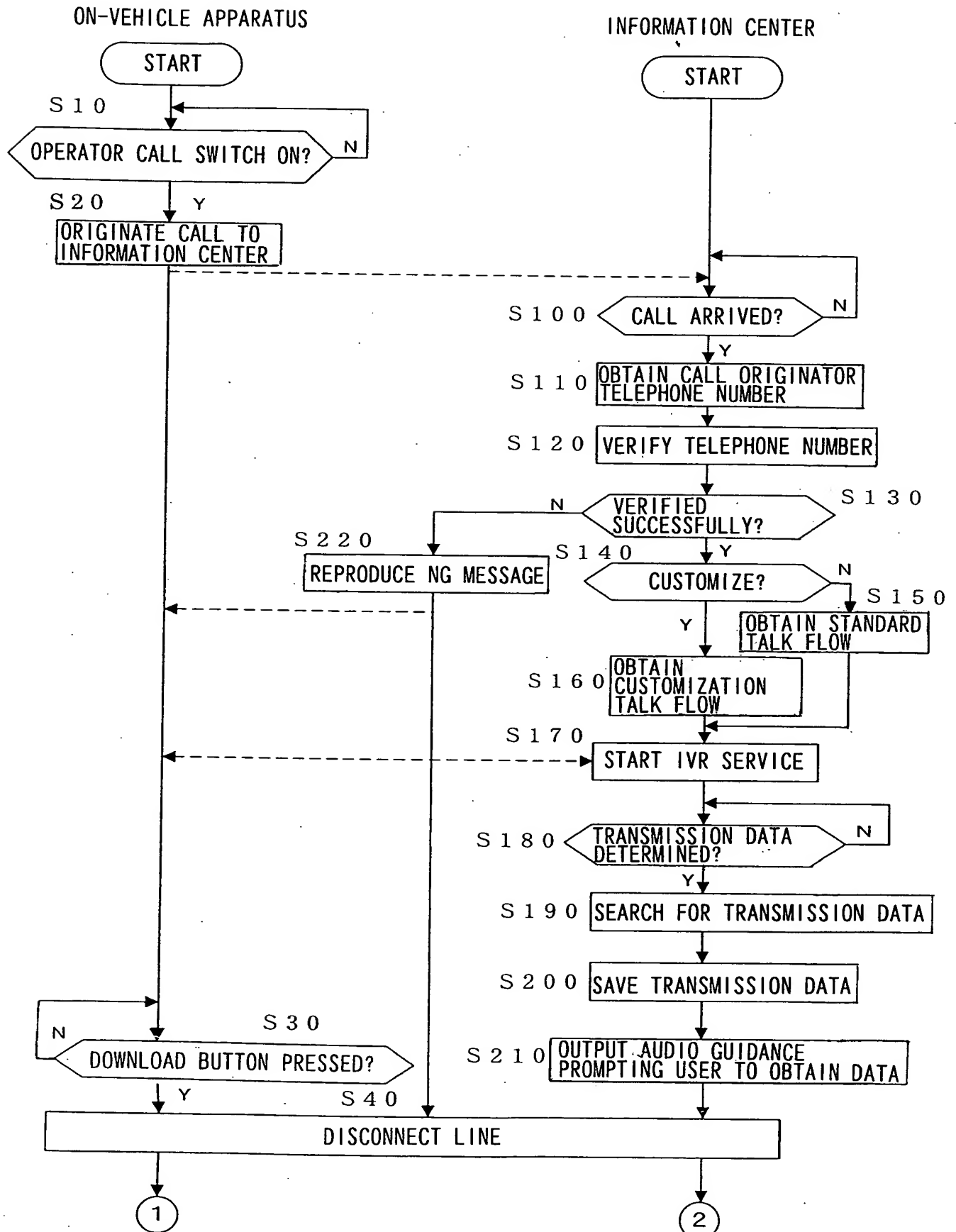


FIG. 7

ON-VEHICLE APPARATUS

INFORMATION CENTER

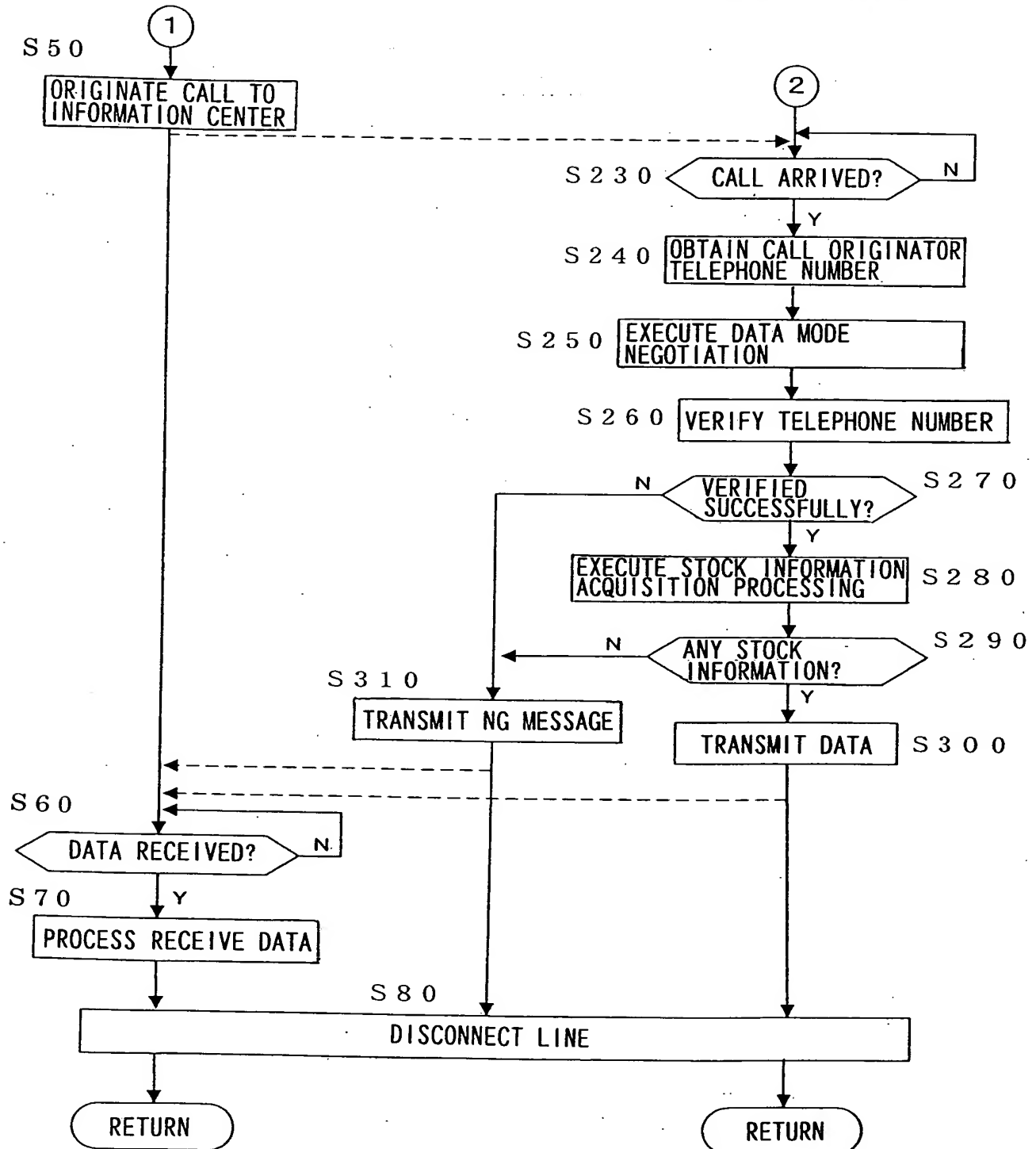


FIG.8

STOCK DATE/TIME	2002/10/10 7:32	
USER ID	*****	
PORTABLE TELEPHONE NUMBER	09088888 X X	
...	...	
STOCK INFORMATION	SERVICE TYPE	10
	TITLE	PACIFIC COAST HIGHWAY
	MAIN TEXT	...
	IMAGES	...
	ICONS	...

	10 TRAFFIC/11 WEATHER/...	
	MAIN TEXT	
	IMAGE DATA	
	ICON DATA	
	...	

FIG.9

YEAR	MONTH	DAY	TIME	SERVICE	CONDITION 1	CONDITION 2	CONDITION 3	CONDITION 4	...
2002	8	2	7:07:00	TRAFFIC INFORMATION	LINE 1	A-CITY TO B-CITY			
2002	8	5	10:00:30	TRAFFIC INFORMATION	LINE 1	B-CITY TO C-CITY			
2002	8	15	20:11:02	PROFESSIONAL BASEBALL UPDATE					
2002	8	15	21:11:11	PROFESSIONAL BASEBALL UPDATE					
2002	8	16	21:00:00	PROFESSIONAL BASEBALL UPDATE					
2002	8	19	22:00:40	PROFESSIONAL BASEBALL UPDATE					
2002	8	20	19:20:30	PROFESSIONAL BASEBALL UPDATE					
2002	8	21	7:00:08	WEATHER FORECAST	CALIFORNIA	EASTERN AREA			
2002	8	25	7:50:55	WEATHER FORECAST	CALIFORNIA	EASTERN AREA			
2002	8	30	8:01:01	WEATHER FORECAST	CALIFORNIA	EASTERN AREA			
2002	8	30	15:03:20	TRAFFIC INFORMATION	LINE 1	A-CITY TO B-CITY			
2002	9	1	12:12:30	WEATHER FORECAST	CALIFORNIA	EASTERN AREA			
2002	9	1	14:00:00	TRAFFIC INFORMATION	LINE 1	A-CITY TO B-CITY			
2002	9	1	20:11:02	PROFESSIONAL BASEBALL UPDATE					
2002	9	2	21:11:11	PROFESSIONAL BASEBALL UPDATE					
2002	9	3	21:00:00	PROFESSIONAL BASEBALL UPDATE					
2002	9	5	7:00:10	TRAFFIC INFORMATION	LINE 3	D-CITY TO E-CITY			
2002	9	5	8:00:00	TRAFFIC INFORMATION	LINE 1	C-CITY TO F-CITY			
2002	9	6	18:55:53	WEATHER FORECAST	CALIFORNIA	WESTERN AREA			
2002	9	8	11:11:11	WEATHER FORECAST	CALIFORNIA	EASTERN AREA			
2002	9	8	19:20:30	PROFESSIONAL BASEBALL UPDATE					
2002	9	8	22:00:40	PROFESSIONAL BASEBALL UPDATE					
2002	9	9	22:00:40	PROFESSIONAL BASEBALL UPDATE					
2002	9	9	23:59:59	WEATHER FORECAST	CALIFORNIA	EASTERN AREA			
...				

FIG.10A

TABULATION RESULT EXAMPLE (1)

SERVICE	NUMBER OF TIMES SERVICES RECEIVED	CONDITION 1	NUMBER OF TIMES SERVICES RECEIVED	CONDITION 2	NUMBER OF TIMES SERVICES RECEIVED	...
PROFESSIONAL BASEBALL UPDATE	20	-	20	-	20	
WEATHER FORECAST	13	CALIFORNIA	13	EASTERN AREA WESTERN AREA	12 1	
TRAFFIC INFORMATION	26	LINE 1	16	A-CITY TO B-CITY B-CITY TO C-CITY C-CITY TO F-CITY	11 4 1	
...		LINE 3	10	D-CITY TO E-CITY	10	

FIG.10B

TABULATION RESULT EXAMPLE (2)

SERVICE	NUMBER OF TIMES SERVICES RECEIVED	CONDITION 1	NUMBER OF TIMES SERVICES RECEIVED	CONDITION 2	NUMBER OF TIMES SERVICES RECEIVED	...
WEEKDAY						
PROFESSIONAL BASEBALL UPDATE	18	-	18	-	18	
TRAFFIC INFORMATION	24	LINE 1	14	A-CITY TO B-CITY B-CITY TO C-CITY D-CITY TO E-CITY	11 3 10	
...						
PROFESSIONAL BASEBALL UPDATE	2	-	2	-	2	
WEATHER FORECAST	13	CALIFORNIA	13	EASTERN AREA WESTERN AREA	12 1	
TRAFFIC INFORMATION	2	LINE 1	2	A-CITY TO B-CITY B-CITY TO F-CITY	1 1	
...						
HOLIDAY						

FIG.11

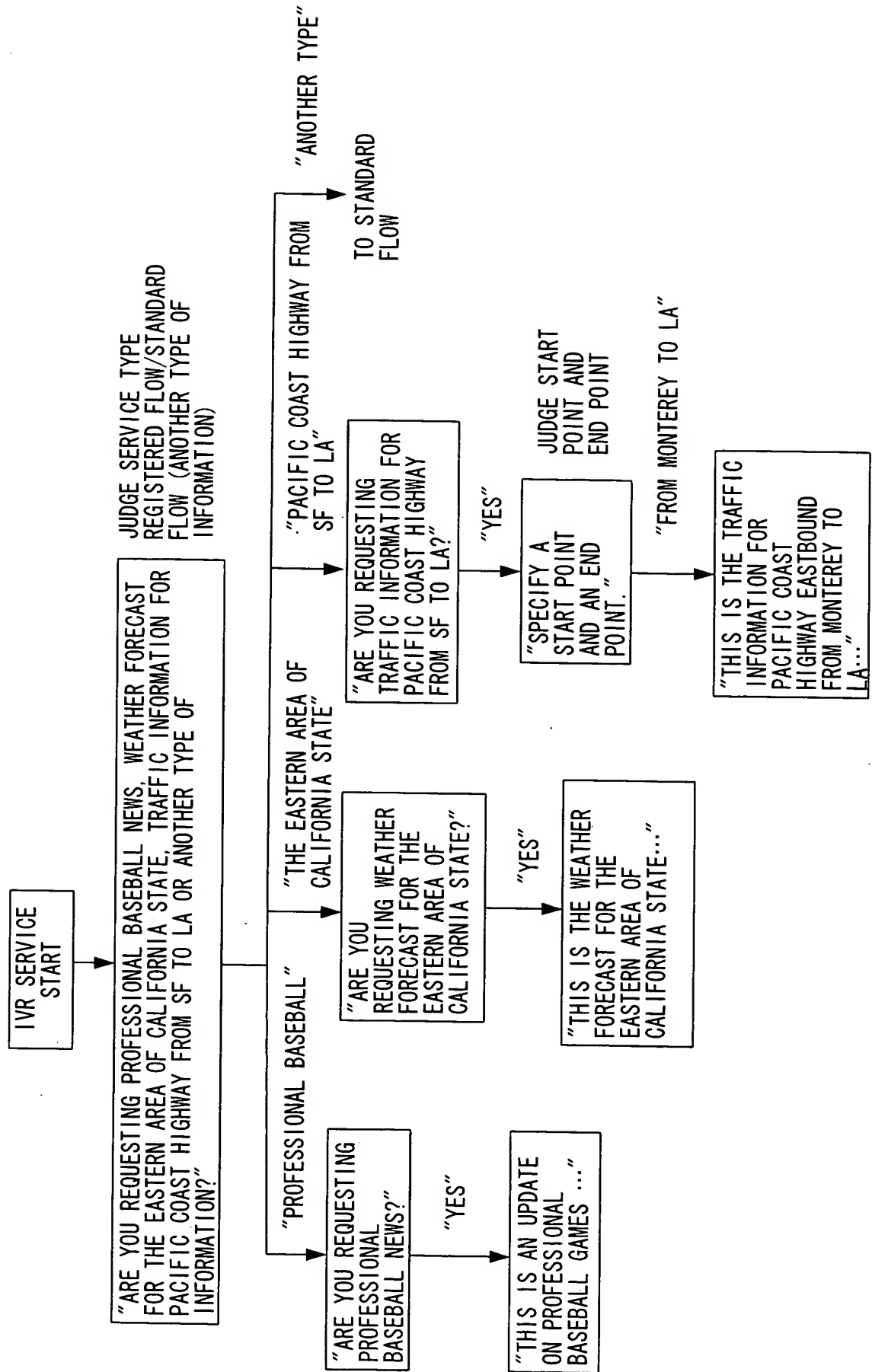


FIG.12

EXTRACTION CONDITION	PARAMETER	DETAILS
NUMBER OF EXTRACTIONS	3	NUMBER OF SERVICES / CONDITIONS TO BE BUILT INTO A HIGHER-ORDER HIERARCHICAL LAYERS IN THE TALK FLOW (PARAMETER 3 INDICATES THAT THREE ITEMS, PROFESSIONAL BASEBALL, WEATHER AND TRAFFIC INFORMATION FROM A-CITY TO B-CITY, ARE BUILT INTO THE HIGHER-ORDER HIERARCHICAL LAYERS, AS SHOWN IN FIG. .11)
EXTRACTION LEVEL	2	<p>THE SERVICE/CONDITION LEVEL (THE LEVEL OF DETAILS) AT WHICH SERVICE/CONDITIONS FREQUENTLY USED BY THE USER ARE TO BE EXTRACTED BASED UPON THE TABULATION RESULTS. THE FREQUENTLY USED SERVICE/CONDITIONS ARE EXTRACTED BASED UPON THE TABULATION RESULTS IN CONFORMANCE TO THIS LEVEL AND THE TALK FLOW IS FORMATTED TO INCLUDE ALL THE DIFFERENT TYPES OF SERVICES THUS EXTRACTED.</p> <p>0: SERVICE 1: CONDITION 1 2: CONDITION 2</p> <p>(2 INDICATES CONDITION 2, AND ACCORDINGLY, THE THREE MOST FREQUENTLY USED SERVICES (AS THE NUMBER OF EXTRACTIONS IS SET AT THREE), I.E., PROFESSIONAL BASEBALL, WEATHER FORECAST FOR THE EASTERN AREA OF CALIFORNIA STATE AND TRAFFIC INFORMATION FOR PACIFIC COAST HIGHWAY FROM A-CITY TO B-CITY, ARE BUILT INTO THE FLOW AT CONDITION 2 SETTING). THE LEVEL MAY BE SET INDIVIDUALLY FOR EACH SERVICE (SEE EXTRACTION 1 BELOW)</p>
(EXTRACTION LEVEL 1 (TRAFFIC))	...	EXTRACTION LEVEL FOR TRAFFIC INFORMATION (WHEN THE EXTRACTION LEVEL FOR TRAFFIC INFORMATION IS SET TO 0 AND THE EXTRACTION LEVELS FOR ALL THE OTHER SERVICES ARE SET TO 2, TRAFFIC INFORMATION/PROFESSIONAL BASEBALL/WEATHER FOR EASTERN AREA OF CALIFORNIA STATE ARE BUILT INTO THE TALK FLOW)
(EXTRACTION LEVEL 2 (NEWS))	...	EXTRACTION LEVEL FOR NEWS
...		

FIG.13A

DATE/ TIME	IVR1	IVR RECOGNITION RESULTS 1 (RESULTS OF IVR RECOGNITION OF SPEECH BY A USER)	IVR2	IVR RECOGNITION RESULT 2	IVR3	IVR RECOGNITION RESULT 3
2002/2/2 15:00	"SPECIFY A SERVICE YOU WISH TO ..."	"TRAFFIC INFORMATION"	"ARE YOU REQUESTING TRAFFIC INFORMATION ?"	"YES"	"SPECIFY A ROAD"	"PACIFIC COAST HIGHWAY"
2002/2/5 9:00	"SPECIFY A SERVICE YOU WISH TO ..."	"GENERAL NEWS"	"ARE YOU REQUESTING GENERAL NEWS?"	"YES"	"SPECIFY A CATEGORY YOU ARE INTERESTED IN"	(NO SUCCESSFUL RECOGNITION)
2002/2/6 12:00	"SPECIFY A SERVICE YOU WISH TO ..."	"WEATHER FORECAST"	"ARE YOU REQUESTING WEATHER FORECAST?"	"YES"	"SPECIFY A STATE"	"ALABAMA STATE"
2002/2/6 12:00	"..."	"..."	"..."	"..."	"..."	"..."
...

(A PORTION OF THE USER'S SPEECH "KABU" IS NOT RECOGNIZED)
(A PORTION OF THE USER'S SPEECH "CALIFORNIA STATE"
IS ERRONEOUSLY RECOGNIZED)

FIG.13B

IVR4	IVR RECOGNITION RESULT 4	IVR5	IVR RECOGNITION RESULT 5	IVR6	IVR RECOGNITION RESULT 6	...
"ARE YOU REQUESTING TRAFFIC INFORMATION FOR PACIFIC COAST HIGHWAY?"	"YES"	"SPECIFY, AN AREA"	"FROM A-CITY TO B-CITY"	"ARE YOU REQUESTING TRAFFIC INFORMATION FOR PACIFIC COAST HIGHWAY FROM A-CITY TO B-CITY?"	"..."	
"WE HAVE NOT BEEN ABLE TO RECOGNIZE YOUR REQUEST. PLEASE STATE YOUR REQUEST AGAIN"	"STOCK" MARKET"	"ARE YOU REQUESTING INFORMATION ON STOCK PRICES?"	"YES"	"..."		
"ARE YOU REQUESTING WEATHER FORECAST FOR ARIZONA STATE?"	"NO"	"WE ARE SORRY. PLEASE SPECIFY THE STATE AGAIN"	"ALABAMA STATE"	"ARE YOU REQUESTING WEATHER FORECAST FOR ALABAMA STATE?"	DISCONNECT LINE	
"..."	"..."	"..."	"..."	"..."	"..."	"..."
...

FIG.14

(CONDITIONS ONLY)

STOCK DATE/TIME		2002/10/10 7:32
USER ID		* * * * *
PORTABLE TELEPHONE NUMBER		090888888XX
.
STOCK INFORMATION	SERVICE TYPE	10
	CONDITION 1	PACIFIC COAST HIGHWAY
	CONDITION 2	A-CITY TO B-CITY

10 TRAFFIC /11WEATHER/...